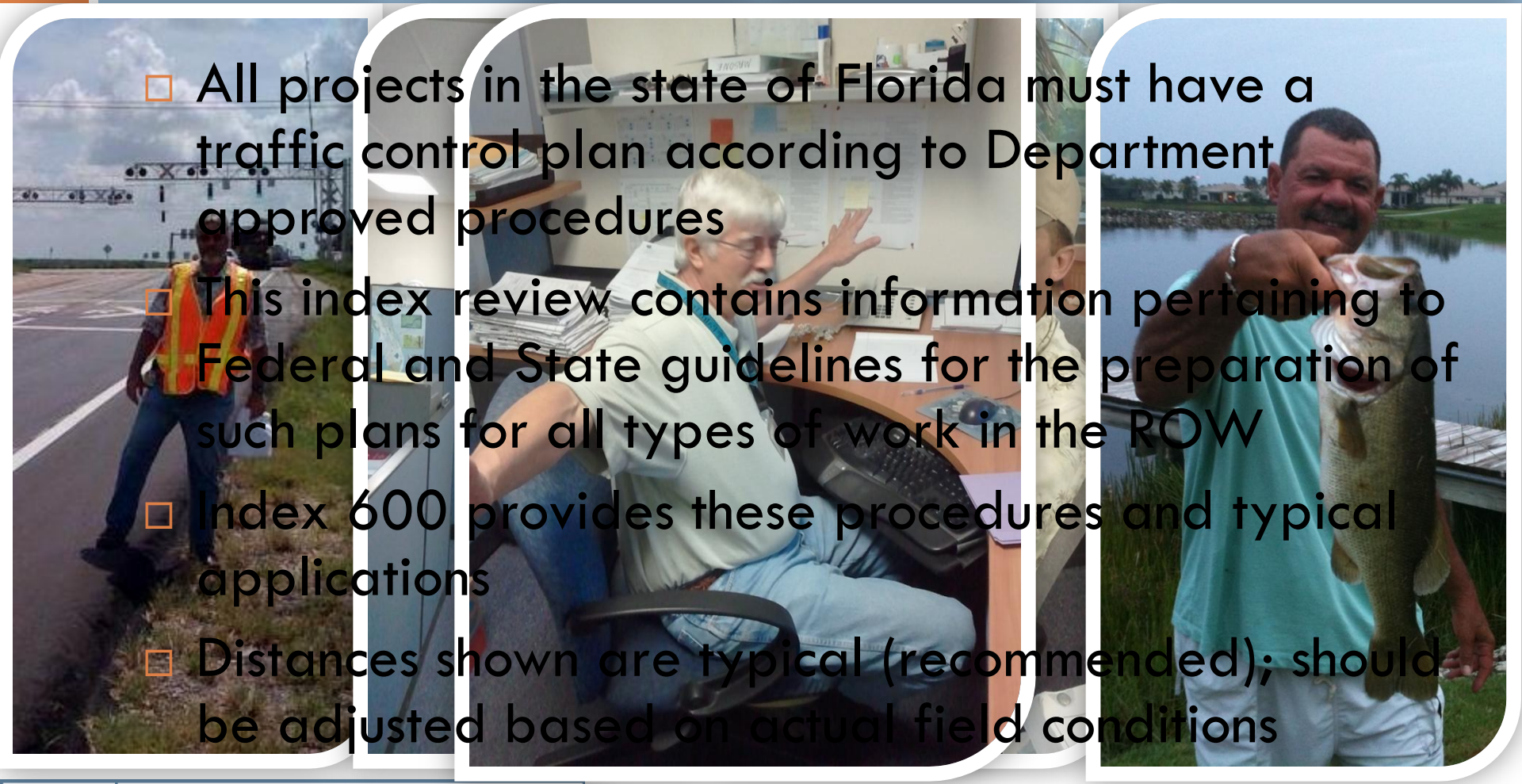
CHANGES TO MOT – WHAT SHOULD YOU KNOW?

FDOT District 4 Annual Permits Seminar

Overview

- Introduction
- Notes to remember
- Types of MOT certifications
  - From MUTCD
- Review of important sections of MOT
  - 600 – Drop-off conditions
  - 601 – 603 – Two Lane Two Way work
  - 611 – 613 – Multilane work
  - 660 – Pedestrian controls
- Changes from 2010 to 2013

Introduction

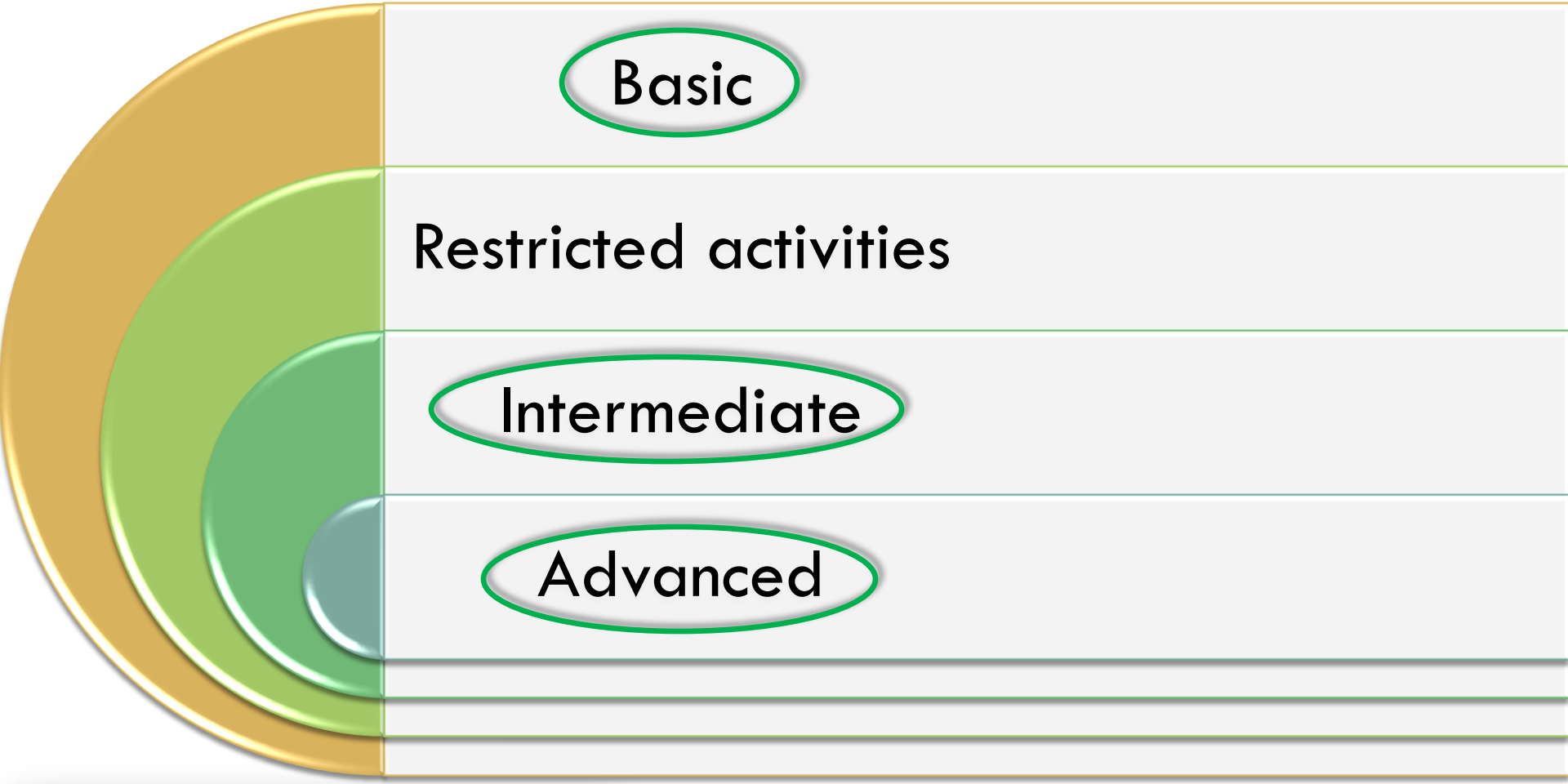


- All projects in the state of Florida must have a traffic control plan according to Department approved procedures
- This index review contains information pertaining to Federal and State guidelines for the preparation of such plans for all types of work in the ROW
- Index 600 provides these procedures and typical applications
- Distances shown are typical (recommended); should be adjusted based on actual field conditions

Special notes to remember

- Clear zone – unobstructed relatively flat area, impacted by construction, extending outward from the edge of the traffic lane
- High visibility apparel – class 2 or class 3 apparel (visible from1000ft)
  - For workers, flaggers, utilities
- Above ground hazards – above ground hazard encroaching on the travel way or is located within the clear zone. During non-working hours all object/equipment must be stored outside of travel way/clear zone or shielded by barrier
  - Manholes-asphalt apron 50:1
- Roadway signing

4 types of MOT certifications



4 types of MOT certifications

Basic

- Required for all persons flagging traffic

4 types of MOT certifications

Restricted activities

- Required for all persons with duties that include direct responsibility for placement of work zone traffic control devices for minor work

4 types of MOT certifications

Intermediate

- Required for all persons with duties that include any of the following activities: responsibility for (a) placement of work zone traffic control devices; (b) field maintenance of traffic control devices; (c) Inspection of placement/operational function of traffic control devices; (d) Drafting or electronic generation of traffic control plans

4 types of MOT certifications

Advanced

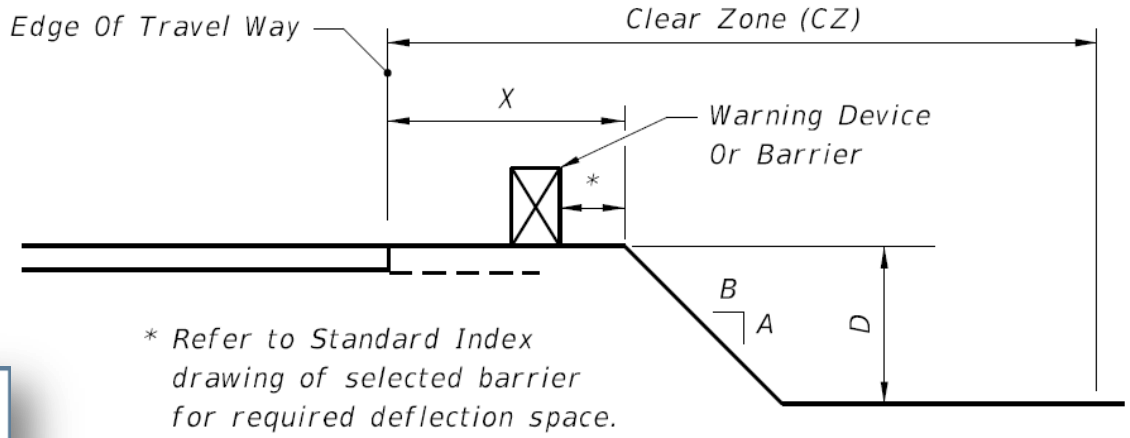
- Required for personnel with responsibility or authority to decide on the specific Maintenance of Traffic requirements to be implemented

Important sections of MOT

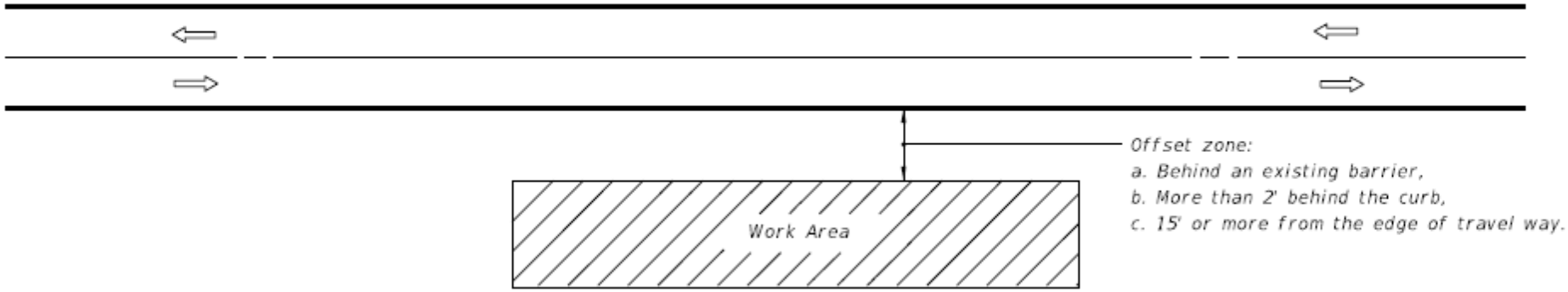
Maintenance of Traffic – Review

Drop-off conditions

A drop-off is defined as a drop in elevation, greater than 3" with slopes (A:B) steeper than 1:4. parallel to the adjacent travel lanes. When drop-offs occur within the clear zone due to construction or maintenance activities, protection devices are required.

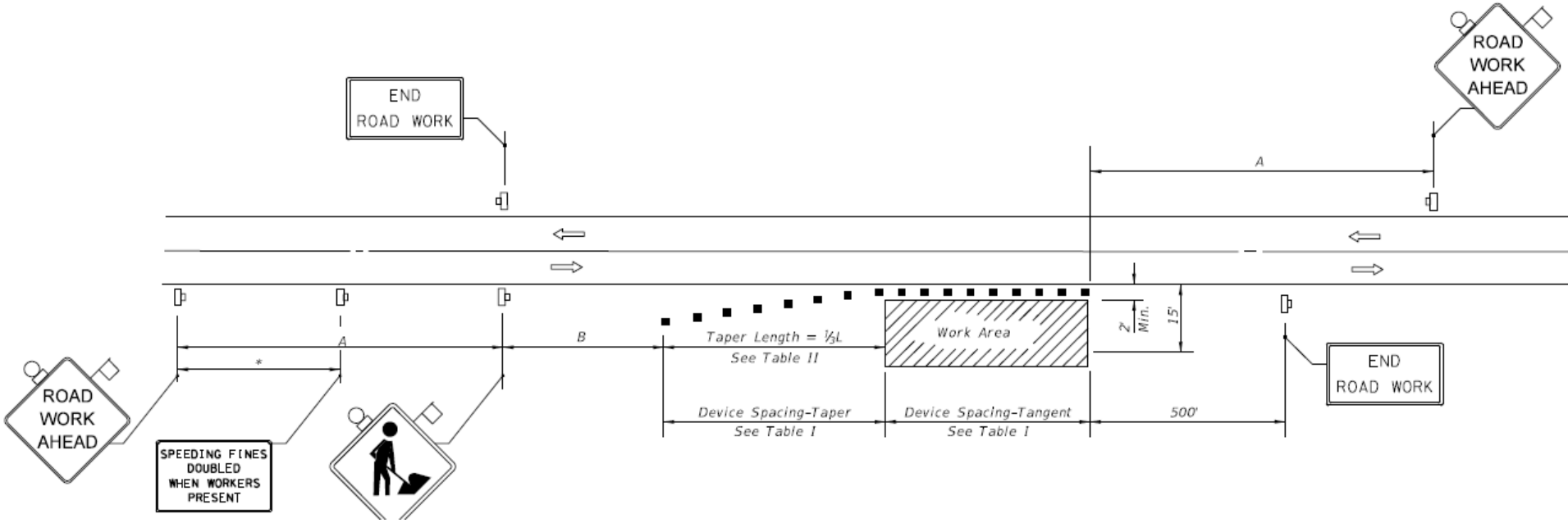


TLTW, work outside shoulder



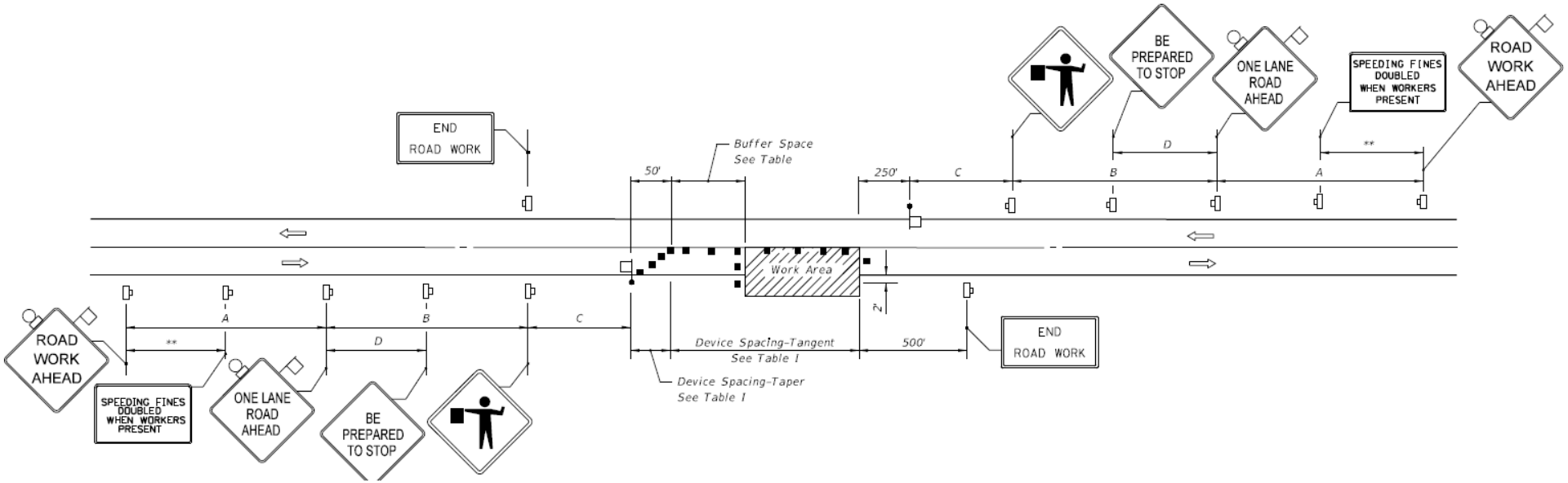
- CONDITIONS
  - WHERE ANY VEHICLE, EQUIPMENT WORKERS AND THEIR ACTIVITIES ARE BEHIND AN EXISTING BARRIER, MORE THAN 2' BEHIND THE CURB, OR 15' OR MORE FROM THE EDGE OF TRAVEL WAY.
    - two or more work vehicles cross the offset zone in any one hour → index 602

TLTW, work on shoulder



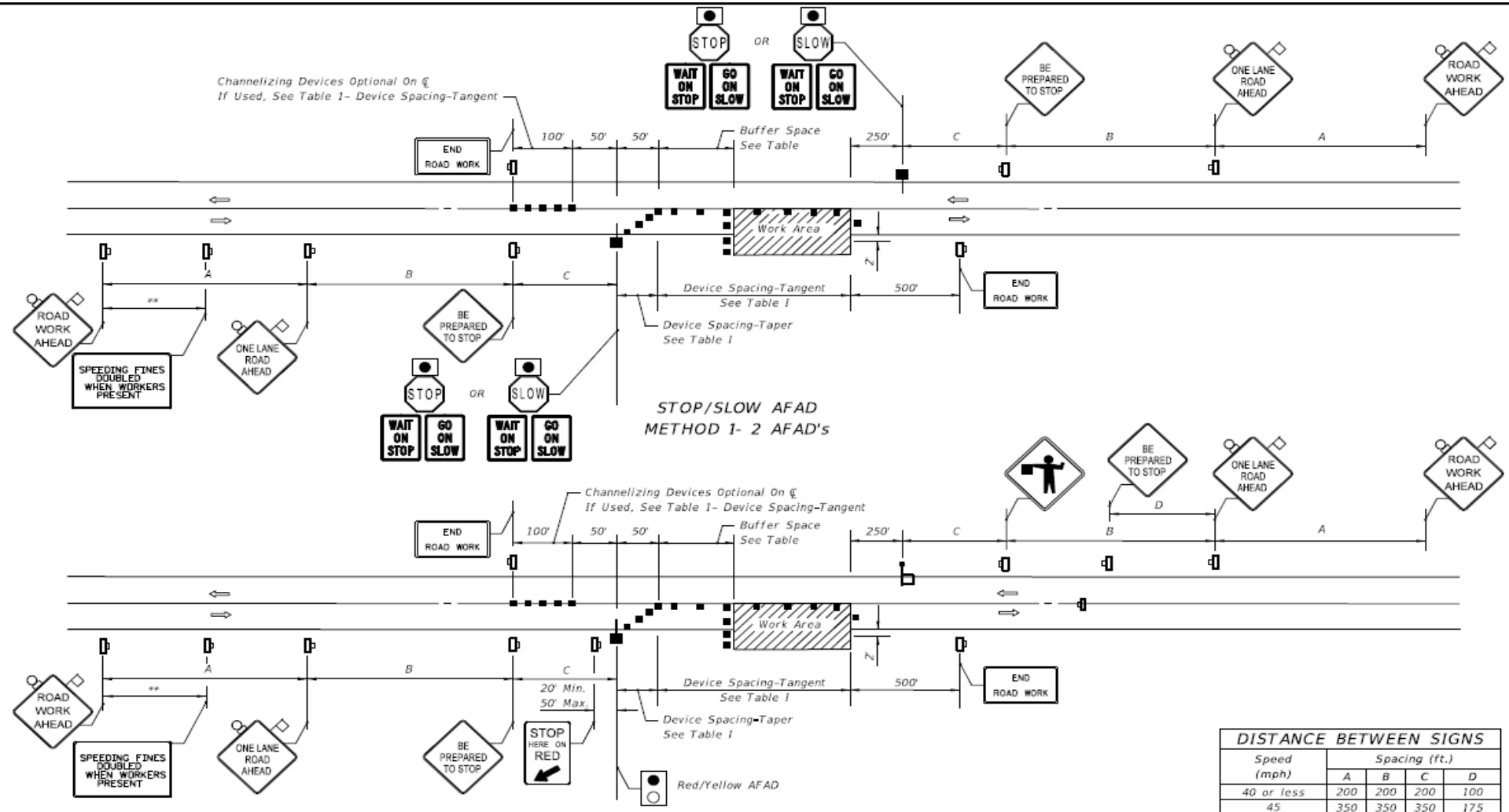
- CONDITIONS
  - WHERE ANY VEHICLE, EQUIPMENT WORKERS AND THEIR ACTIVITIES ENCROACH THE AREA CLOSER THAN 15' BUT NOT CLOSER THAN2' TO THE EDGE OF TRAVEL WAY
    - Four or more work vehicles cross the offset zone in any one hour –› advanced flagger signs

TLTW, work within travel way



- CONDITIONS
  - WHERE ANY VEHICLE, EQUIPMENT WORKERS AND THEIR ACTIVITIES ENCROACH THE AREA BETWEEN THE CENTERLINE AND A LINE 2' OUTSIDE THE EDGE OF TRAVEL WAY.
    - Work operations shall be confined to one traffic lane, leaving the opposite lane open to traffic

TLTW, work within travel way

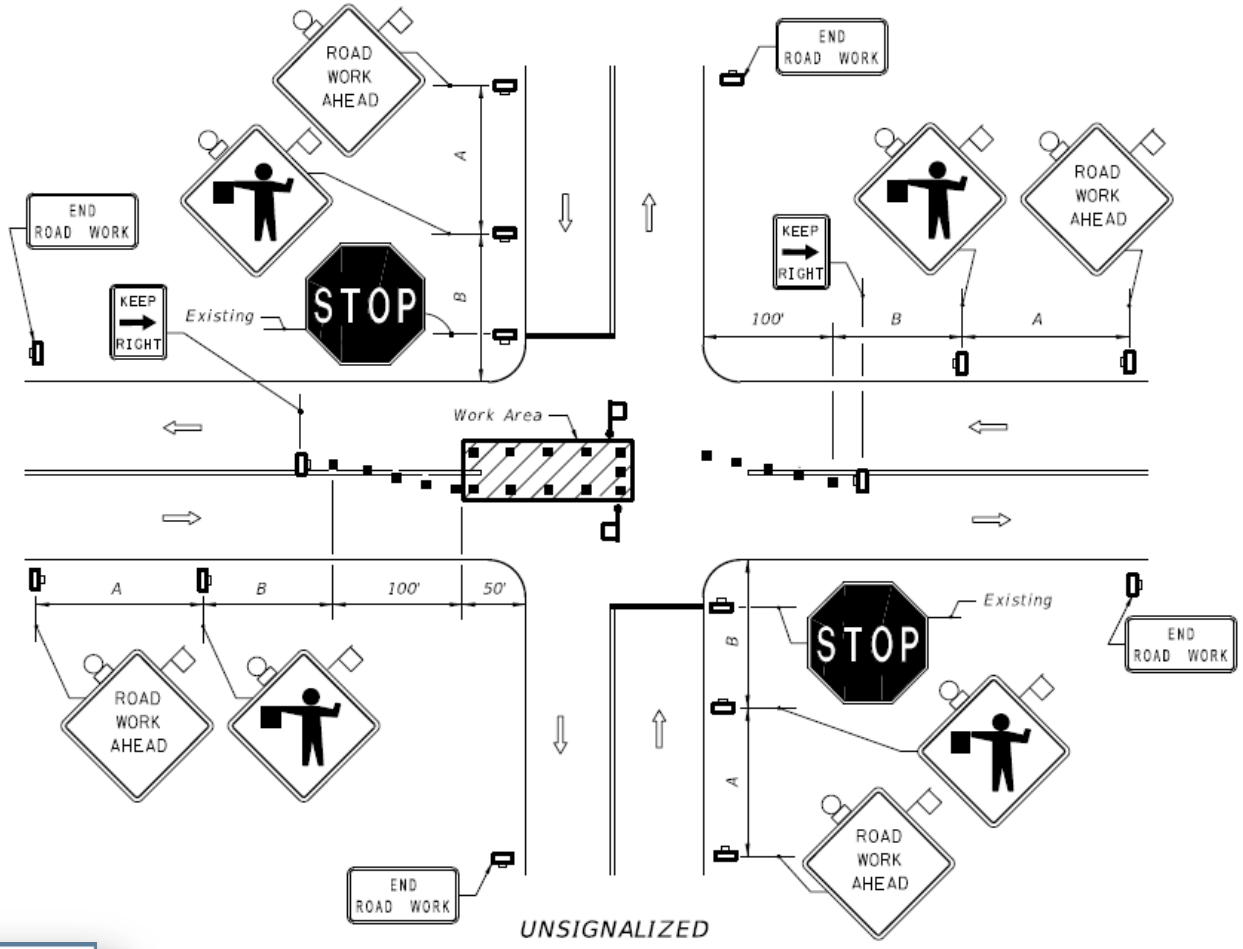


DISTANCE BETWEEN SIGNS				
Speed (mph)	Spacing (ft.)			
	A	B	C	D
40 or less	200	200	200	100
45	350	350	350	175
50	500	500	500	250
55 or greater	2640	1640	1000	500

* (See Sheet 1 Notes)
** (See Sheet 1 Notes)

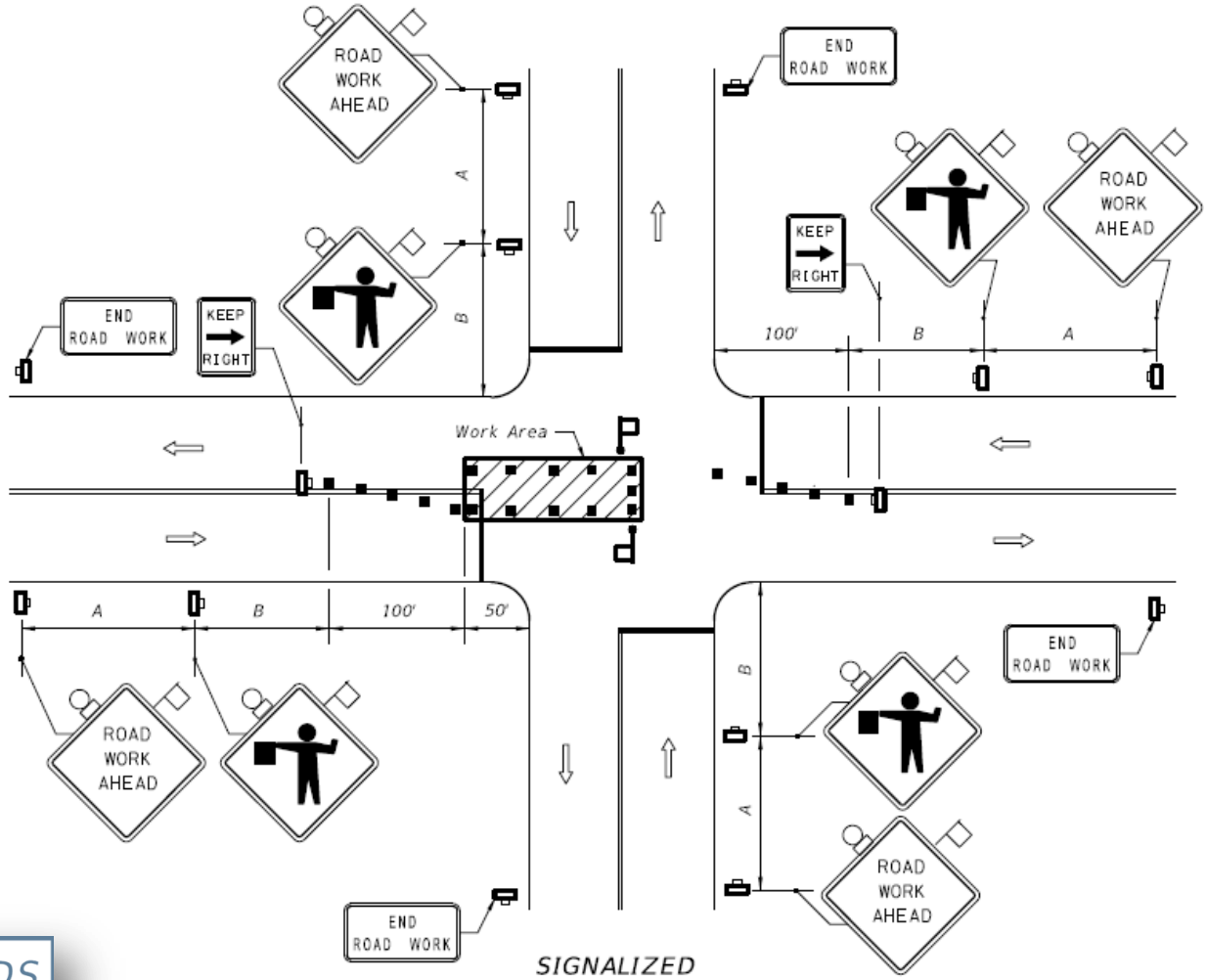
TLTW, work in the intersection

Unsignalized intersections

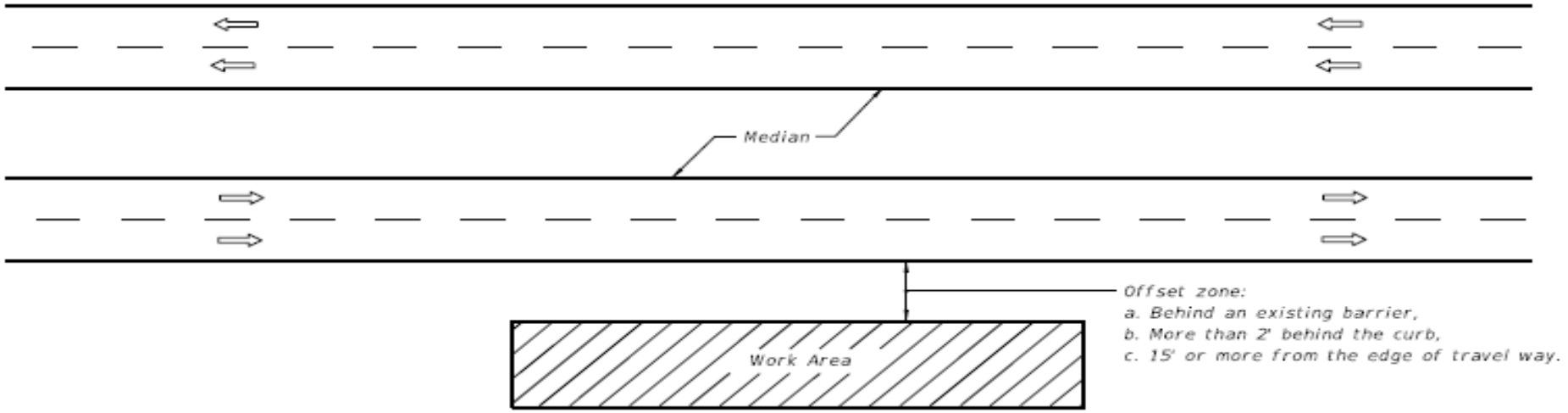


TLTW, work in the intersection

Signalized intersections



Multilane work outside shoulder



- CONDITIONS
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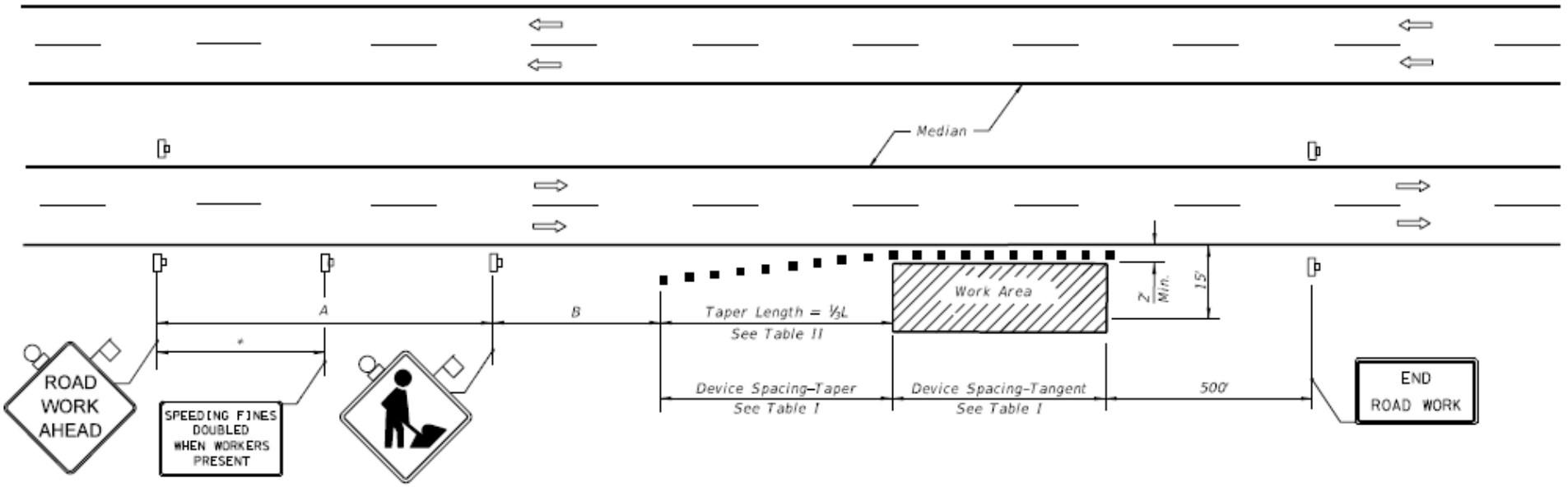
    - two or more work vehicles cross the offset zone in any one hour → index 612

Multilane, work on shoulder



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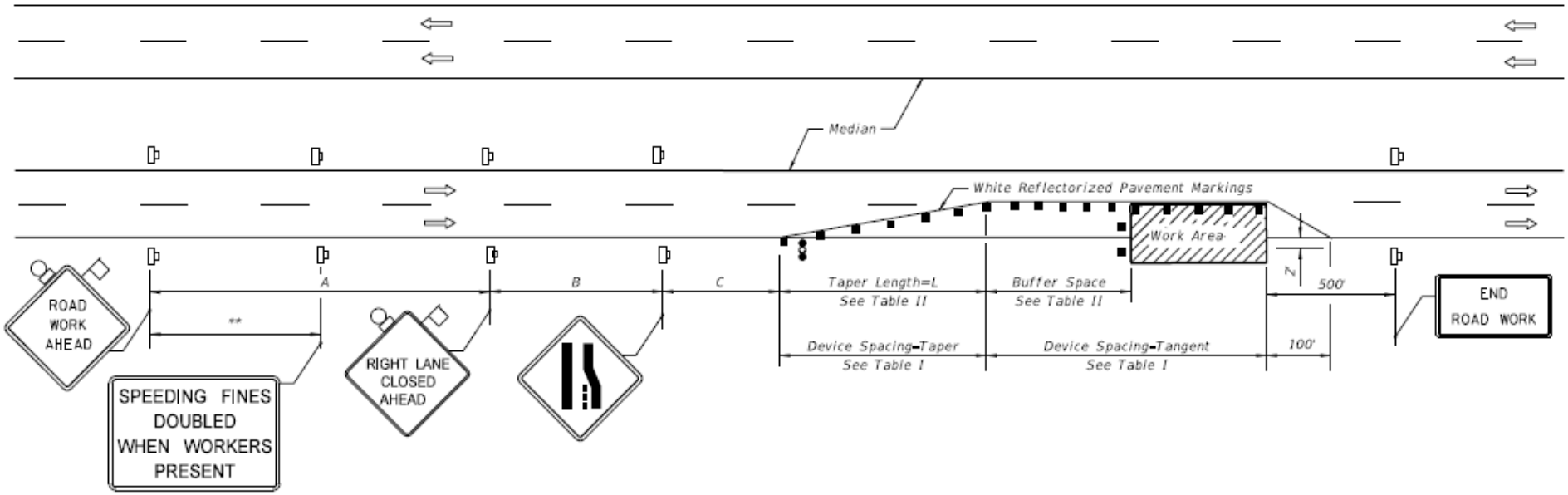
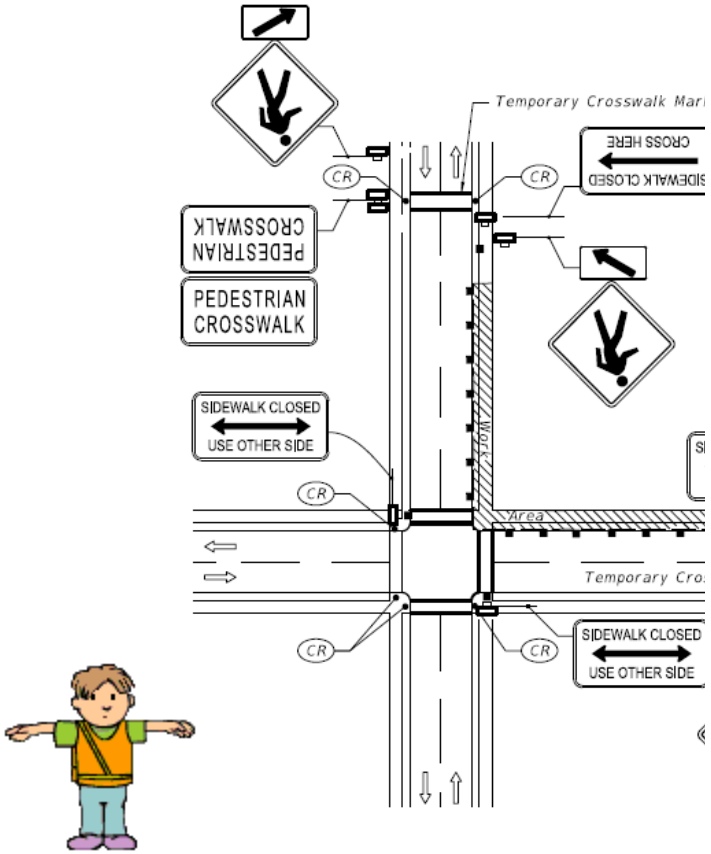
    - Four or more work vehicles cross the offset zone in any one hour –› advanced flagger signs

Multilane, work within travel way median/outside lane

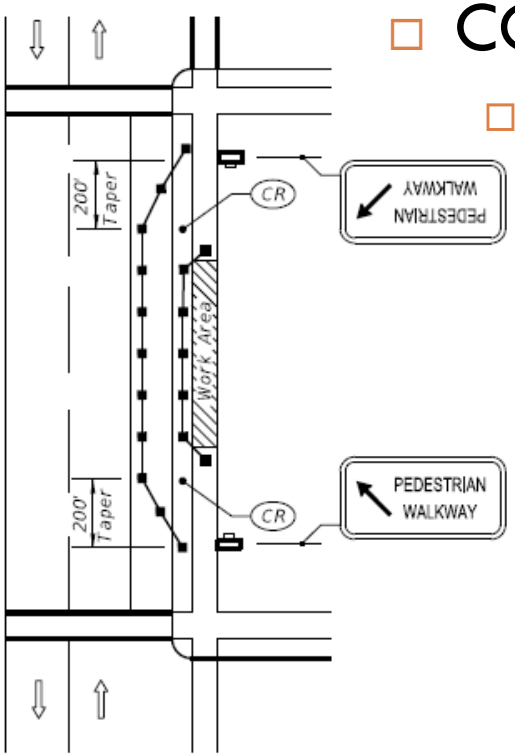


- CONDITIONS
  - WHERE ANY VEHICLE, EQUIPMENT WORKERS AND THEIR ACTIVITIES ENCROACH ON THE LANE ADJACENT TO EITHER SHOULDER AND THE AREA 2' OUTSIDE THE EDGE OF TRAVEL WAY.
    - Work operations shall be confined to one traffic lane, leaving the adjacent lane open to traffic

Pedestrian control for sidewalk closure



CORNER S
WITH TEMP



MID-BLOCK SIDEWALK CLOSURE
WITH TEMPORARY WALKWAY

- CONDITIONS
  - WHERE ANY VEHICLE, EQUIPMENT WORKERS OR THEIR ACTIVITIES ENCROACH ON THE SIDEWALK FOR A PERIOD OF MORE THAN 60 MINUTES

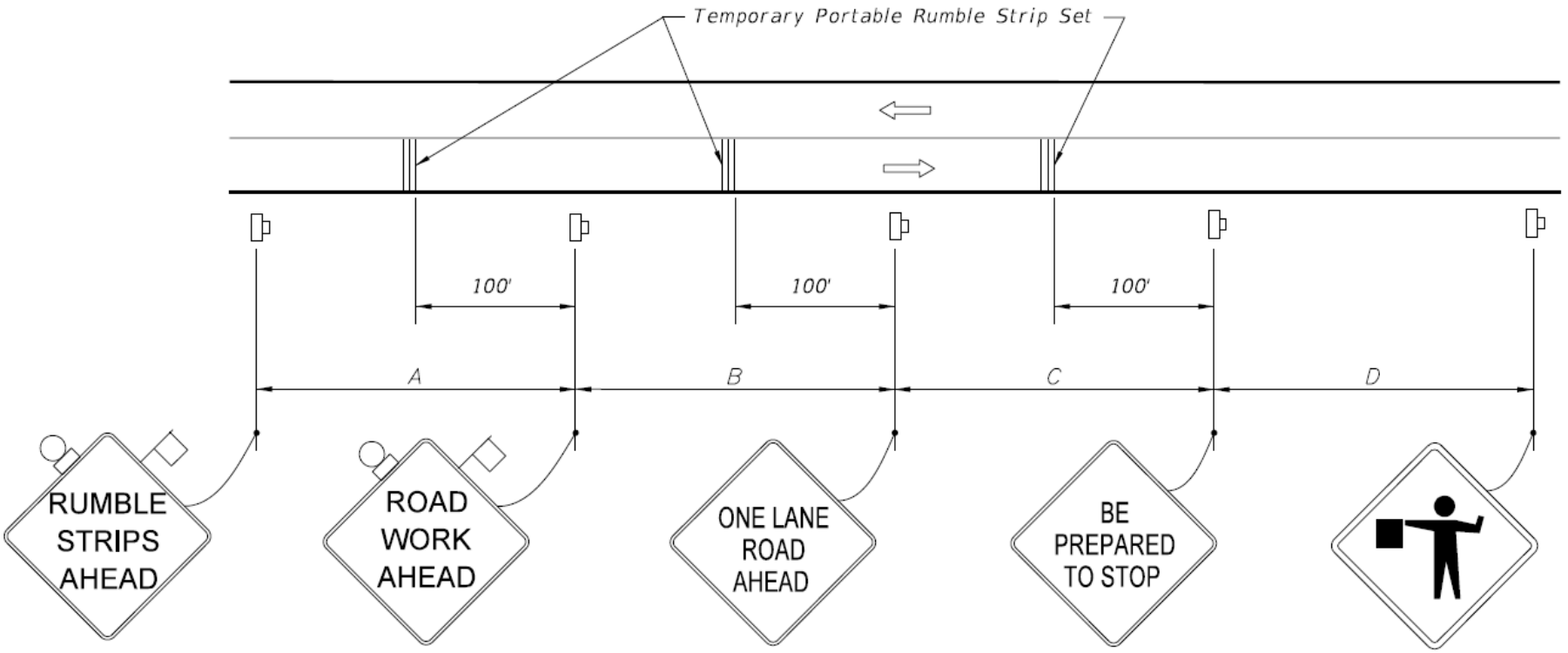
Changes from 2010 to 2013

Some big some minor

TEMP. TRAFFIC CONTROL DEVICES

- Shall be on either the Department's Qualified Product List (QPL) or the Department's Approved Products List (APL).
- Removed as soon as practical when they are no longer needed. When work is suspended for short periods of time, temporary devices that are no longer appropriate shall be removed or covered.
- Arrow Boards, Portable Changeable Message Signs, Radar Speed Display Trailer, Portable Regulatory Signs, and any other trailer mounted device shall be delineated with a temporary traffic control device placed at each corner when in use and shall be moved outside the travel way and clear zone or be shielded by a barrier or crash cushion when not in use.

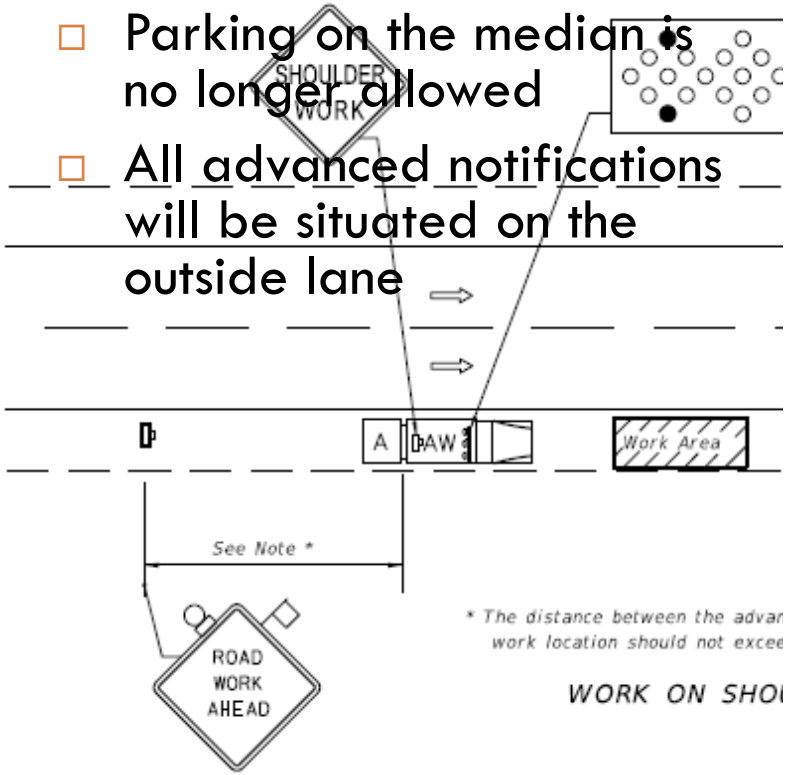
General information

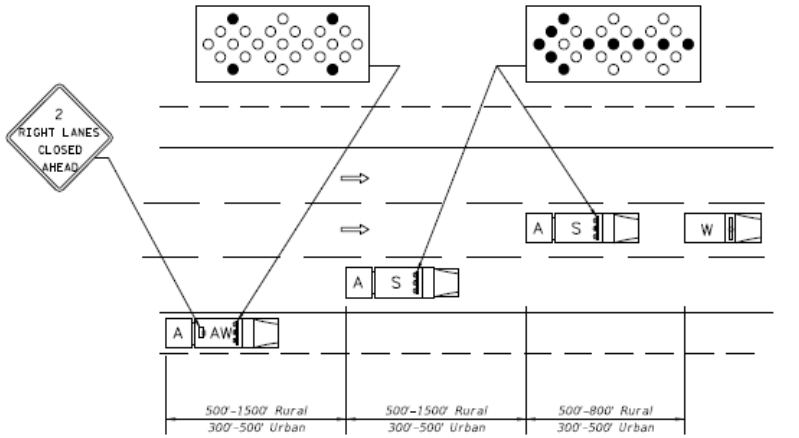


TYPICAL PLACEMENT OF TEMPORARY INTERNALLY BALLASTED RUMBLE STRIPS

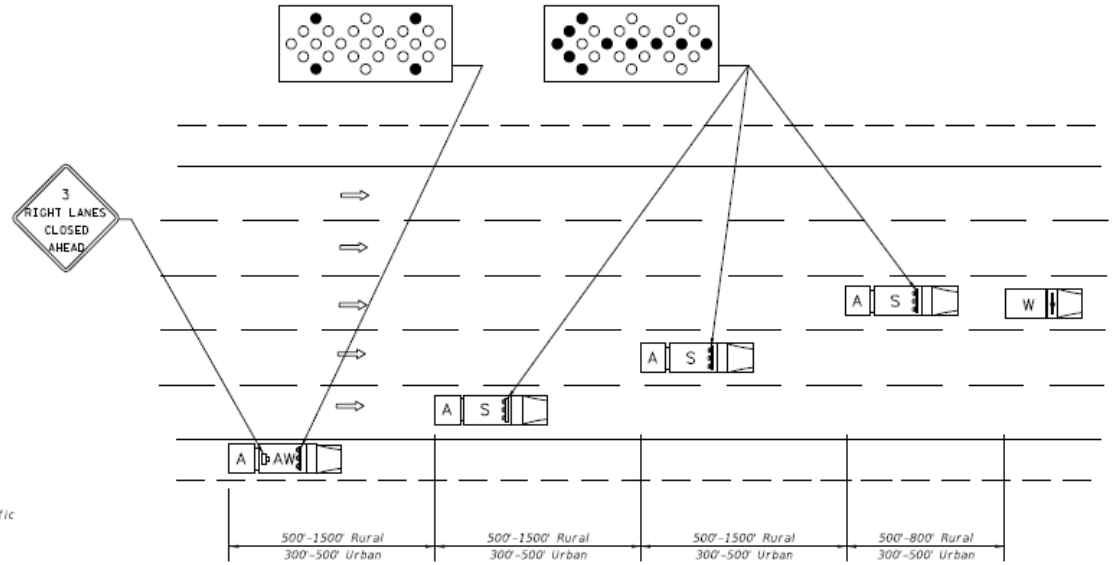
Multilane, mobile ops work on shoulder, work w/in travel way

- Parking on the median is no longer allowed
- All advanced notifications will be situated on the outside lane





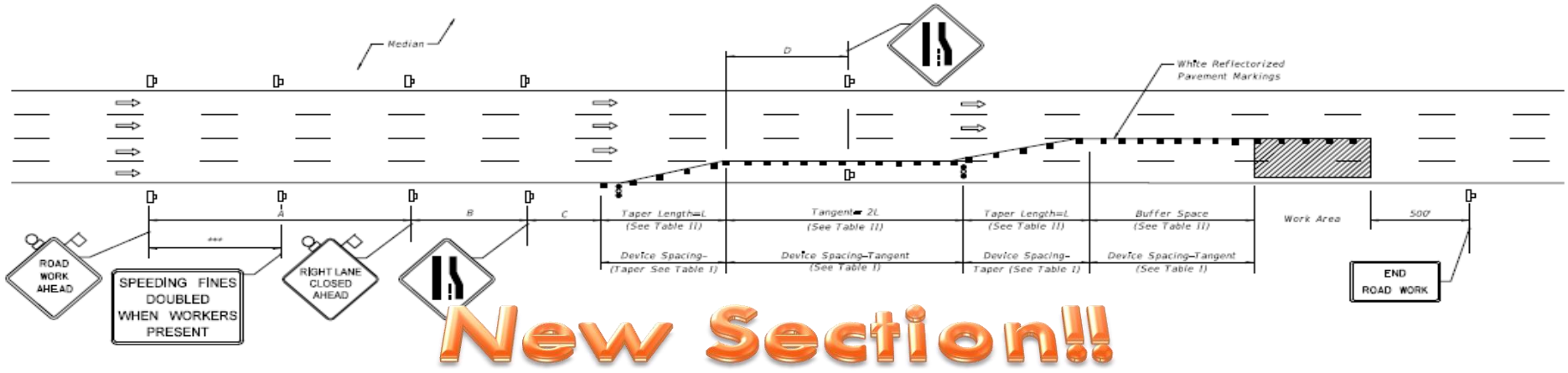
WORK WITHIN TRAVEL WAY, CENTER LANE OR OUTSIDE CENTERLINE



Multilane work w/in travel way/double lane closure

623

26



New Section!!

DISTANCE BETWEEN SIGNS				
Speed	Spacing (ft.)			
	A	B	C	D**
40 mph or less	200	200	200	L
45 mph	350	350	350	L
50 mph	500	500	500	L
*55 mph or greater	2640	1640	1000	L

* The ROAD WORK 1 MILE sign may be used as an alternate to the ROAD WORK AHEAD sign MILE sign may be used as an alternate to the RIGHT LANE CLOSED AHEAD sign.

** See Table II for L

*** 500' beyond the ROAD WORK AHEAD sign or midway between signs whichever is less.

Table I Device Spacing				
Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50
50 to 70	25	50	50	100

Table II Buffer Space and Taper Length				
Speed (mph)	Buffer Space	Taper Length (12' Lateral Transition)		Tangent
	Dist. (ft.)	L (ft.)	Notes (Merge)	2L (ft.)
25	155	125	$L = \frac{WS^2}{60}$	250
30	200	180		360
35	250	245		490
40	305	320		640
45	360	540	L = WS	1080
50	425	600		1200
55	495	660		1320
60	570	720		1440
65	645	780		1560
70	730	840		1680

When Buffer Space cannot be attained due to geometric constraints, the greatest attainable length shall be used, but not less than 200 ft.

For lateral transitions other than 12', use formula for L shown in the notes column.
Where:
L= Length of taper in feet
W= Width of lateral transition in feet
S= Posted speed limit (mph)

GENERAL NOTES

1. Work operations shall be confined to the two outside traffic lanes, leaving the adjacent lane(s) open to traffic.
2. On undivided highways the median signs as shown are to be omitted.
3. When work is performed in the median lane on divided highways, the channelizing device plan is inverted and left lanes closed and lane ends signs substituted for the right lanes closed and lane end signs.
4. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
5. For general TCZ requirements and additional information, refer to Index No. 600.
6. When paved shoulders having a width of 8 ft. or more are closed, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the travel way. See Index No. 612 for shoulder taper formulas.

SYMBOLS

- Work Area
- Sign With 18"x 18" (Min.) Orange Flag And Type B Light
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Advance Warning Arrow Board

DURATION

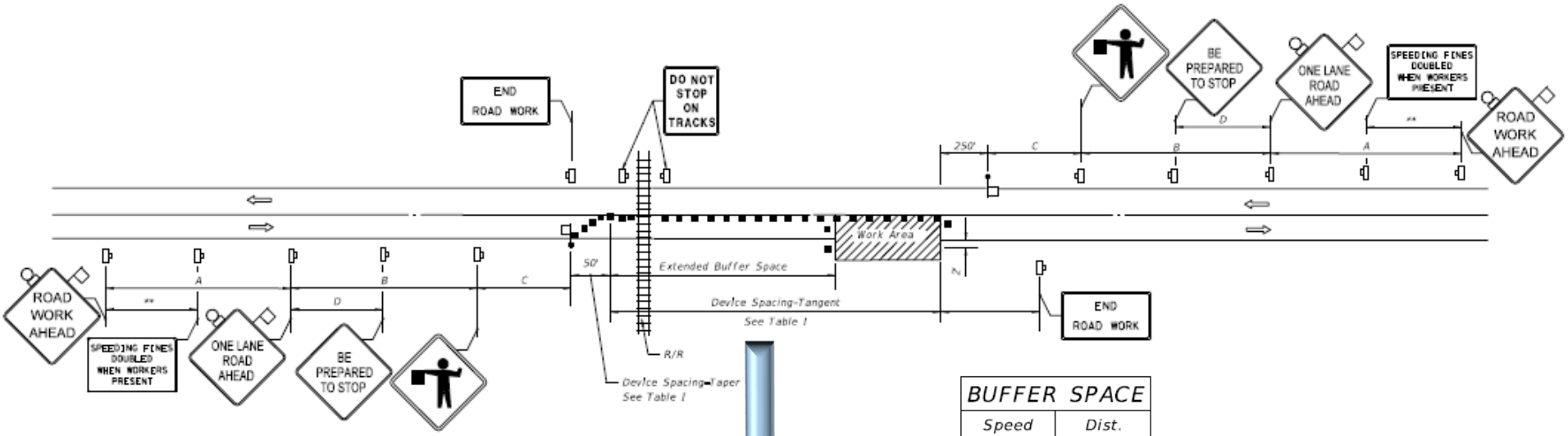
Temporary white edgeline may be omitted for work operations less than three (3) days.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE TWO LANES ADJACENT TO EITHER SHOULDER.

LAST REVISION	DESCRIPTION:	FDOT DESIGN STANDARDS 2013	MULTILANE, WORK WITHIN THE TRAVEL WAY DOUBLE LANE CLOSURE	INDEX NO.	SHEET NO.
07/01/10				623	1

Work in vicinity of RR crossing



BUFFER SPACE	
Speed (mph)	Dist. (ft.)
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730

When Buffer Space cannot be attained due to geometric constraints, the greatest attainable length shall be used, but not less than 200 ft.

Examples of MOT

The good, the bad, and the ….

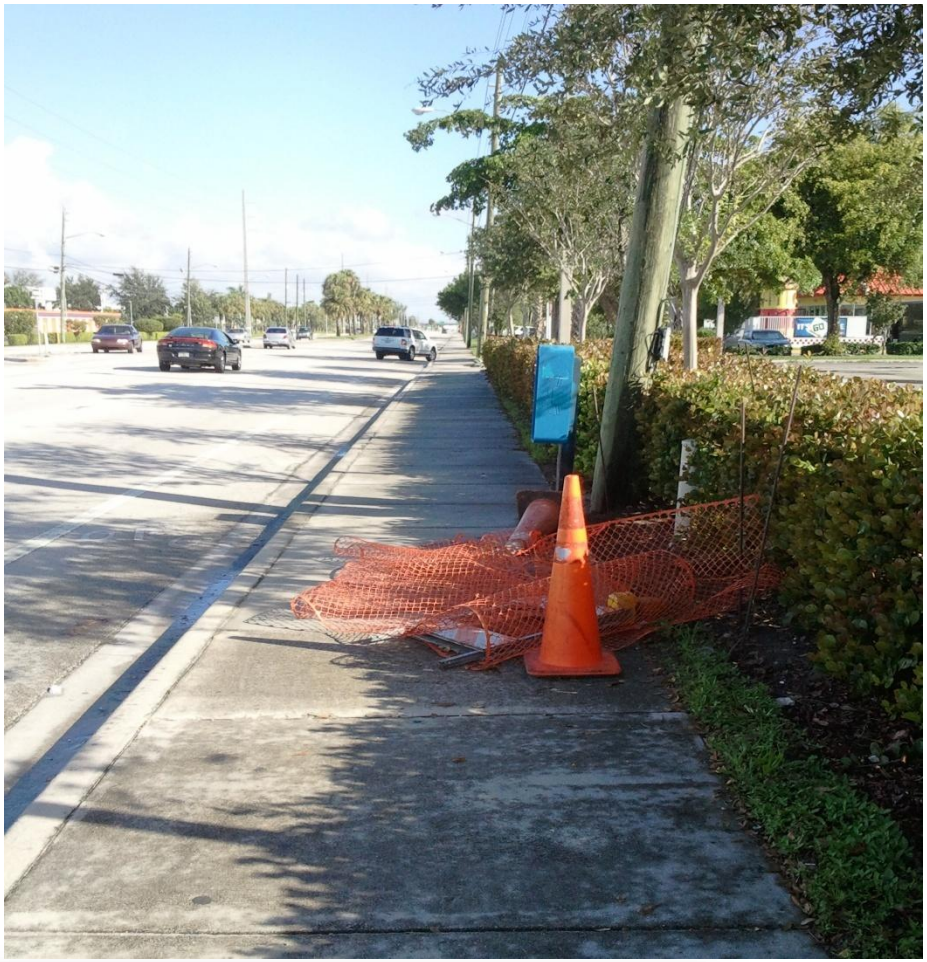
Guess the MOT

Good!!

Guess the MOT

BAD!!

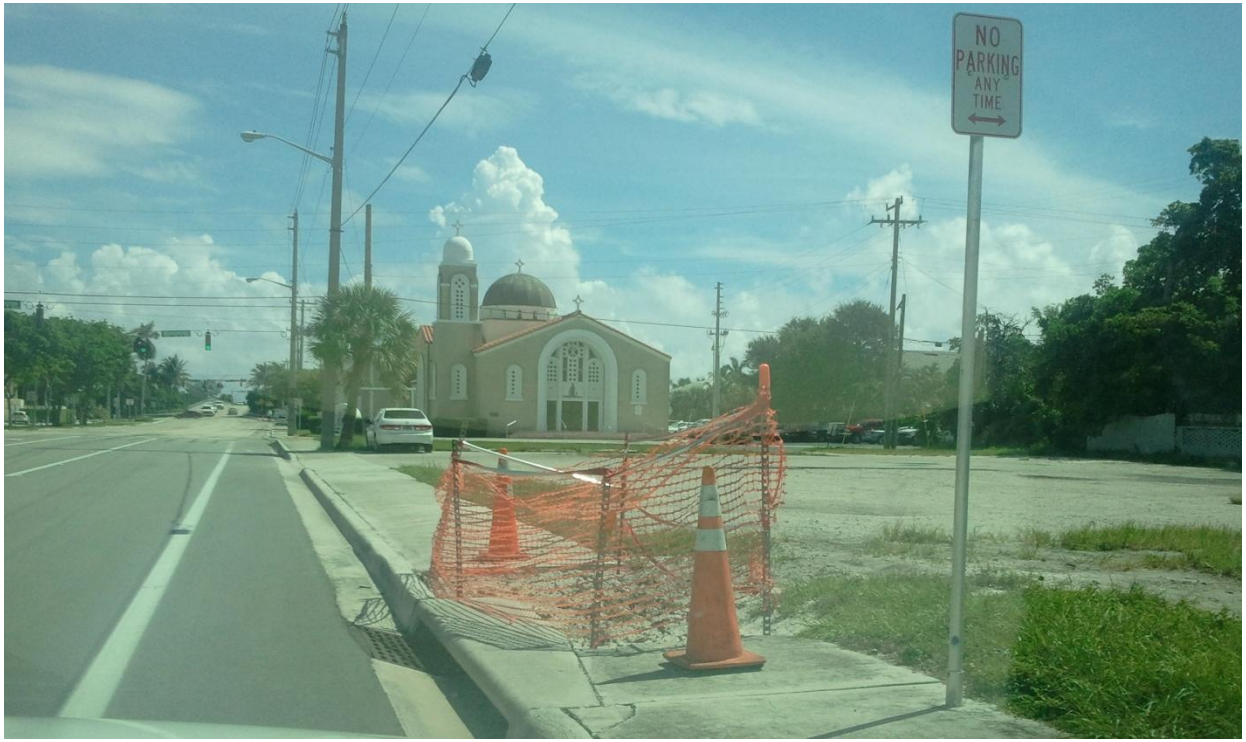
Guess the MOT



Guess the MOT

Guess the MOT

BAD!!



Guess the MOT

BAD!!

Guess the MOT

Good!!

Guess the MOT

BAD!!

Guess the MOT

Guess the MOT

Guess the MOT

Guess the MOT

Good!!

QUESTIONS?

http://www.dot.state.fl.us/rddesign/DesignStandards/Standards.shtm